TECHNICAL WORK MAY NOT BEGIN PRIOR TO CO APPROVAL NASA/GODDARD SPACE FLIGHT CENTER P. 1 of 6 REQUEST FOR TASK PLAN / TASK ORDER CONTRACT NO. TASK NO. CONTRACTOR APPROP: FY AMENDMENT NAS5-TASK NO. 99124 QSS Group, Inc. 423-228-11-19-89 00 TASK TITLE: (NTE 80 characters; include Project name) EOS CHEMISTRY PROJECT OPERATIONS DEVELOPMENT APPROVALS (Type or print name and sign) entre desire ASSISTANT TECHNICAL REPRESENTATIVE (OR TASK MONITOR) Angelita C. Kelly 11/22/99 581 423 4-5317 BRANCH HEAD CODE PHONE Phillip A. Sabelhaus⁽ 424 6-2368 CONTRACTING OFFICER'S TECHNICAL REPRESENTAT CODE PHONE Robert S. Lebair, Jr. 560 6-6588 FLIGHT HARDWARE, CRITICAL GSE OR SOFTWARE? CONTRACTING OFFICER'S QUALITY REP DESIGNATED FAM: '(IF YES, NEED CODE 303 CONCURRENCE NEXT BLOCK) I 1 YES The contractor shall identify and explain the reason for any deviations, exceptions, (To be completed by Contracting Officer) or conditional assumptions taken with respect to this Task Order or to any of the C.O. Requested Quote on: technical requirements of the Task Order Statement of Work and related specifications. Date: DEC 17 1999 The contractor shall complete and submit the required Reps and Certs. Contractor will develop specification or statement of work under this task for a future procurement. XI NO [] YES Flight hardware will be shipped to GSFC for testing prior to final delivery. [] YES f 1 NO [X] N/A Government Furnished Property/Facilities: X NO [] YES -- SEE LIST OF GFP (offsite only) / FACILITIES (onsite only) Onsite Performance: [] NO X YES If yes: X) PARTIAL If partial, indicate onsite work in SOW by asterisk (*) X NO Surveillance Plan Attached: [] YES Highlighted Contract Clauses: (to be completed by Contracting Officer) The effective date of this task is February 10, 2000. INCENTIVE FEE STRUCTURE (check one) (See Contract NAS5-99124, Attachment K, Incentive Fee Plan) No. 1 No. 2 No. 3 X No. 4 No. 5 Cost 10% 50% 25% 25% % % 25% 25% 50% Schedule 15% Technical 75% 25% 50% 25% % (To be completed by Contracting Officer) The target cost of this task order is \$ 129,050 The target fee of this task order is \$ 3,005 The total target cost and target fee of this task order as contemplated by the Incentive Fee clause of this contract is \$ 132,055 The maximum fee is \$ 4,392 The minimum fee is \$0. AUTHORIZED SIGNATURE: THE CANADA TO SERVED TO SE THIS TASK ASSIGNMENT IS ISSUED ACCORDING TO THE CONTRACT CLAUSE "TASK ASSIGNMENTS AND REPORTS Lorrie L. Eakin Contracting Officer /o TYPED NAME OF CONTRACTING OFFICER

SIGNATURE OF CONTRACTING OFFICER

DATE

CONTRACTOR'S ACCEPTANCE:

AUTHORIZED SIGNATURE

12/98 (OLDER VERSIONS ARE OBSOLETE)

GSFC FORM 703-1845 CONTRACTING OFFICER, COTR, CODE 303, RESOURCES ANALYST, ASSISTANT TECHNICAL REPRESENTATIVE

TECHNICAL WORK MAY NOT BEGIN PRIOR TO CO APPROVAL NASA/GODDARD SPACE FLIGHT CENTER Page 2 of 44 REQUEST FOR TASK PLAN / TASK ORDER SCONTRACT NO. TASKING. TASK NO. **AMENDMENT** 182 99124 QSS Group, Inc. Applicable paragraphs from contract Statement of Work: STATEMENT OF WORK: (Continue on blank paper if additional space is required) See Page 3. PERFORMANCE SPECIFICATIONS: See Page 4. **APPLICABLE DOCUMENTS:** None. TASK END DATE: 6/30/00 MILESTONES/DELIVERABLES AND DATES: See Page 4. PERFORMANCE STANDARDS: On-time delivery/completion of the stated milestones/deliverables Schedule: Technical: ATR's acceptance of the above FINAL DELIVERY DESTINATION (NAME, BLDG, ROOM): A. C. Kelly, building 32, room E208C

NASA/GODDARD SPACE FLIGHT CENTER

REQUEST FOR TASK PLAN / TASK ORDER

Contract NAS5-99124

STATEMENT OF WORK:

TASK #: 182

EOS CHEMISTRY PROJECT OPERATIONS DEVELOPMENT

The contractor shall apply experienced expertise to assist in accomplishing the objectives of the EOS CHEM Mission Operations Manager (MOM) position for the EOS CHEM Project. The contractor shall assist the MOM in his/her responsibilities for the development of the plans, procedures and processes of the CHEM Flight Team. The Flight Team is comprised of project and spacecraft engineers, instrument teams, the Flight Operations Team [FOT], and other supporting centers of expertise. The contractor is expected to develop expert knowledge of observatory systems and make significant progress toward development of space and ground system operations plans and procedures. Further, the contractor shall take an active role in relating observatory systems knowledge to the Flight Team, assist the FOT in preparing for the mission, and serve as a training resource for all of the Flight Team. The contractor shall also assist the MOM in establishing an efficient Flight Team organization and in developing operations methodologies for use by the team. The work specified in this task is intended to assist the Flight Team in preparing for the launch of the EOS CHEM observatory, currently planned for December 2002.

The contractor shall function under the guidance of the CHEM Mission Operations Manager, who shall resolve conflicts, establish due dates, and allocate responsibilities as required. Travel will be required, as directed by the MOM, to support technical meetings and reviews, and to interact with members of the CHEM Flight Team.

Specific areas requiring action of the contractor are:

- Supplement the development of operations readiness through analysis and critique of
 operations plans and procedures, spacecraft and instrument operations documentation,
 mission planning procedures, EOC capabilities and effectiveness, spacecraft to EOC
 interoperability, instrument operations and science data collection, interfaces to external
 support elements, and orbit dynamics and control.
- Acquire an expert knowledge of observatory subsystems and instruments for development of
 operations scenarios, anomaly resolution processes, and system analysis capabilities. The
 contractor shall make this knowledge available as a resource for the Flight Team.
- Develop a detailed CHEM Operations Concept Document.
- Compile and categorize observatory information and documents in order to establish a
 technical reference library in the EOC. The contractor shall also develop an accompanying
 library document tree covering the contents of the library.

NASA/GODDARD SPACE FLIGHT CENTER

REQUEST FOR TASK PLAN / TASK ORDER

Contract NAS5-99124

STATEMENT OF WORK:

TASK #: 182

- Define the functional requirements and responsibilities for the members of the CHEM Flight Team.
- Develop and document the mission management chain of command and develop operational procedures for the interworking of the Flight Team [non-FOT] and the FOT.
- Develop and document the Flight Team [non-FOT] facility requirements.
- Provide Observatory operations inputs to launch vehicle mission planning process.
- Develop knowledge of the Space Network (SN) and Ground Network (GN) (EPGS) to assist in the mission planning, network testing and training.
- Develop, prepare, and replicate presentation materials to be used in EOS CHEM.
 management and formal mission reviews. Organize and conduct workgroup meetings to develop and edit presentation materials.
- Provide services to the CHEM MOM related to his/her responsibilities for management and conduct of the Operations Working Group. Develop and maintain the OWG action item database.
- Review and assist in editing vendor produced operations documents for completeness and GSFC operations perspective. The contractor shall work with the vendor to evaluate and improve documented operations methodologies and processes.

Other Resources

Travel to several US cities and Europe shall be considered within the scope of this task. At least two trips to the remote instrument team locations should be planned. Travel to the spacecraft manufacturer [TRW, Inc., Redondo Beach, CA] is also expected. At least 6 trips should be planned for status reviews and other operations engineering meetings. Daily travel to the GSFC to attend meetings and coordinate activities should also be planned. Other travel is expected but cannot be specified in this work statement. Reimbursement for travel cost shall be in accordance with FAR 31.205-46 [Travel Costs] with further limitations as follows: air transportation shall be reimbursed at coach fare and automobile transportation mileage shall be reimbursed at the current rate authorized for Government employees.

NASA/GODDARD SPACE FLIGHT CENTER

REQUEST FOR TASK PLAN / TASK ORDER

Contract NAS5-99124

STATEMENT OF WORK:

TASK #: 182

Period of Performance

The performance of this task is expected to continue through June 30, 2000.

Deliverables/Milestones and Dates

- 1. The contractor shall organize, edit, and reproduce the presentation materials necessary to complete the CHEM project management and formal reviews due 10 days prior to the review.
- 2. Generate and maintain the Operations Working Group action items database. Provide the CHEM MOM with a status of the database monthly.
- 3. Provide monthly status report detailing work progress, problems, and items requiring CHEM project attention.
- 4. Develop and maintain an EOS CHEM Operations Concept document. A draft document is required by February 15, 2000. A final plan is required by June 30, 2000.
- 5. Develop and maintain a technical reference library document tree. The initial tree is required by March 15, 2000. Updates shall be delivered on an as-needed basis.
- 6. Provide a documented statement of the facility requirements of the Flight Team [non-FOT]. The statement is required by March 15, 2000.

Performance Specifications

- Autonomy and professionalism of the contractor's work: Acceptable performance is that the Mission Operations Manager is satisfied that the contractor is completing the work with minimal direction and oversight.
- Analysis and planning of operations: Acceptable performance is that execution of plans and procedures occur without anomalies attributable to flaws in the plans or procedures.
- Preparation of formal review materials: Acceptable performance is that upon finalization the materials are current, accurately reflect operations plans, and errors are minimal.

NASA/GODDARD SPACE FLIGHT CENTER

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- Management of the Operations Working Group: Acceptable performance is that the group transaction history contains minimal errors and that transaction histories are disseminated to the group without lapses in distribution.
- Identification and tracking of issues: Acceptable performance is that the MOM believes he is being kept informed and that issues are captured with minimal errors.
- Development of the Mission Operations Concept document: Acceptable performance is that the document is kept current, accurately reflects operations plans, and contains minimal errors.
- Monthly status report: Acceptable performance is that the MOM is satisfied that he/she is being kept informed of the status of work performed and of issues requiring project attention.
- Reference library tree: Acceptable performance is that the final document tree contains minimal errors.